

REMARKS

Applicants appreciate the Examiner's thorough examination of the present application as evidenced by the Final Official Action of May 18, 2005 (hereinafter "Final Action"). In response, Applicants respectfully request the Examiner to take one final look at independent Claims 1 and 18 in light of the remarks included herein. Applicants respectfully submit that the cited reference does not disclose or suggest, at least, deriving a quality of service specification by implication from relations between components, control flows, data flows, and resources. Accordingly, Applicants submit that all pending claims are in condition for allowance. Favorable reconsideration of all pending claims is respectfully requested for at least the reasons discussed hereafter. In the interest of brevity, Applicants' remarks below are focused on the "Response to Arguments" section on page 9 of the Final Action. To ensure that Applicants' remarks are fully responsive to the Final Action, Applicants' previous Amendment mailed October 12, 2004 is hereby incorporated herein by reference.

Independent Claims 1 and 18 are Patentable

Independent Claims 1 and 18 stand rejected under 35 U.S.C. §102(a) as being anticipated by the article entitled "Volume II: Technical Concepts of Component-Based Software Engineering, 2nd Edition" by Bachmann et al. (hereinafter "Bachmann"). Independent Claim 1 is directed to a system for component-based processing and recites, in part:

...
a quality of service specification derivation element having for output an application model in combination with a quality of service specification derived by implication from relations between components, control flows, data flows, and resources;
...(Emphasis added.)

Independent Claim 18 includes similar recitations. As highlighted above, independent Claim 1 recites a quality of service specification derivation element in which a quality of service specification is derived by *implication* from relations between components, control flows, data flows, and resources. This is described, for example, in the Specification at page 14, lines 6 through 15 where the text explains that the quality of service specification may be derived from

quality of service requirements that are explicitly attached to the components or flows and/or from quality of service requirements that are *implicitly* derived from the relationships within model comprising the components, control flows, data flows, and resources.

The Final Action cites section 5.2.3 of Bachmann as disclosing the use of specified quality attributes in a component-based software system. (Final Action, page 3). The Final Action further cites a passage from section 6.1 of Bachmann related to a contractually specified interface specification in which functional properties of a component are specified. (Final Action, page 3). In the "Response to Arguments" section of the Final Action on pages 9 and 10, the Final Action appears to state that Bachmann discloses the general concept of a component-based software model along with the general concept of a quality of service aspect to the component-based model. The Final Action further appears to state that Bachman discloses the concept of a service contract in which "contractual mutual obligations ensure that independently developed components obey certain rules so that components interact (or can not interact) in predictable ways..." (Final Action, page 9).

In response, Applicants acknowledge that Bachman discloses a general model for component-based software design and implementation. Applicants respectfully disagree, however, that Bachmann discloses implicitly deriving a quality of service specification by *implication* from relations between components, control flows, data flows, and resources. In sharp contrast to the recitations of independent Claim 1, Bachmann explains in Section 6.1 that the contractually specified interface is *explicitly* implemented by a developer in an application programming interface (API) through the use of an assertion language. (Bachman, section 6.1, first paragraph). Moreover, Bachman does not appear to contain any disclosure in section 5.2.3, where the concept of specifying a quality of service is introduced, related to the derivation of such quality of service attributes. Rather, section 5.2.3 of Bachmann appears to focus primarily on a formal notation for describing such quality of service attributes in a component-based software design. Thus, while Applicants acknowledge that Bachmann describes the use of an API that is *explicitly* created by a developer and that defines the agreements between a client and a component (Bachman, section 6.1, paragraph one, first sentence), Applicants respectfully submit that Bachmann does not disclose or suggest deriving a quality of service specification by

implication from relations between components, control flows, data flows, and resources as recited in independent Claim 1.

Accordingly, for at least the foregoing reasons, Applicant respectfully submits that independent Claims 1 and 18 are patentable over Bachmann and that Claims 2 - 17 and 19 - 49 are patentable at least per the patentability of independent Claims 1 and 18.

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CONCLUSION

In light of the above remarks, Applicants respectfully submit that the above-entitled application is now in condition for allowance. Favorable reconsideration of this application, as amended, is respectfully requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (919) 854-1400.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "D. Scott Moore", written over the typed name.

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